

Serial Number: 09/998,284**ENTERED**

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: \_\_\_\_\_
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other \_\_\_\_\_
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: \_\_\_\_\_
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: \_\_\_\_\_
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: \_\_\_\_\_
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: \_\_\_\_\_
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: \_\_\_\_\_
- ☒ Deleted: ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/lienano at end of file;  
☐ page numbers throughout text; ☐ other invalid text, such as \_\_\_\_\_
- ☐ Inserted mandatory headings, specifically: \_\_\_\_\_
- ☐ Corrected an obvious error in the response, specifically: \_\_\_\_\_
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: \_\_\_\_\_
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: \_\_\_\_\_
- ☐ Other: \_\_\_\_\_

Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

OIPF

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/998,284

DATE: 12/11/2001

TIME: 17:00:33

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF3\12112001\I998284.raw

#2.

3 <110> APPLICANT: POULSEN, et al.  
 5 <120> TITLE OF INVENTION: COMPOSITION  
 7 <130> FILE REFERENCE: 674509-2035  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/998,284  
 C--> 9 <141> CURRENT FILING DATE: 2001-11-30  
 9 <150> PRIOR APPLICATION NUMBER: PCT/IB00/00829  
 10 <151> PRIOR FILING DATE: 2000-06-02  
 12 <150> PRIOR APPLICATION NUMBER: GB 9913050.2  
 13 <151> PRIOR FILING DATE: 1999-06-04  
 15 <160> NUMBER OF SEQ ID NOS: 2  
 17 <170> SOFTWARE: PatentIn version 3.1  
 19 <210> SEQ ID NO: 1  
 20 <211> LENGTH: 1644  
 21 <212> TYPE: DNA  
 22 <213> ORGANISM: Chondrus crispus  
 24 <400> SEQUENCE: 1  
 25 atggctactt tgccacaaa ggaccaggt tacattgtta ttgacgtcaa cgctgggtact 60  
 27 ccagacaagc ctgaccacaa attgccatcc atgaagcaag gtttcaacag aagatggatt 120  
 29 ggtaccaaca tcgatttcgt ttacgtcgtt tacactccac aaggtgcttg tactgctttg 180  
 31 gacagagcta tggaaaagtg ttctccaggt accgtcagaa tcgtttctgg tggtcactgt 240  
 33 tacgaagact tcgttttcga cgaatgtgtc aaggctatta tcaacgttac tggtttggtt 300  
 35 gaatctgggt acgacgacga tagaggttac ttctgtctct ccggtgacac caactggggt 360  
 37 tccttcaaga ccttgttcag agaccacggt agagttttgc caggtggttc ctgttactcc 420  
 39 gtcggttttg gtggtcacat tgcggtgga ggtgacggt ttttgccag attgcacggt 480  
 41 ttgccagtcg attggttatc cgggtgtgaa gttgtcgtta agccagtcct gaccgaagac 540  
 43 tctgtttcta agtacgttca caaggattcc gaaggtaacg acggtgagtt gttttgggct 600  
 45 cactctgggt gaggtggagg taacttcggt attatcacca aatactactt caaggatttg 660  
 47 ccaatgtctc caagaggtgt catcgcttct aacttacact tctcttgga cggtttcaact 720  
 49 agagatgcct tgcaagattt gttgactaag tacttcaagt tggctagatg tgattggaag 780  
 51 aatactgttg gtaagttcca aatcttccac caagcagctg aagagtttgt tatgtacttg 840  
 53 tatacatcct actctaacga cgccgagaga gaagttgccc aagacagaca ctatcatttg 900  
 55 gaggtgaca ttgaacagat ctacaaaaca tgcgagccta ccaaagctct tggtggtcat 960  
 57 gctggttggt ctcttttccc tgttagacct agaaagagac acacatccaa gacttcttat 1020  
 59 atgcatgacg agactatgga ctacccttct tacgctttga ctgagactat caacggttcc 1080  
 61 ggtcctaata agagaggtaa gtacaagtct gcttacatga tcaaggactt tccagacttc 1140  
 63 cagattgatg ttatctggaa ataccttact gaggttctct acggtttgac tagtgccgaa 1200  
 65 atgaaggatg ctcttcttca ggttgatatg ttcggtggtg agattcacia ggttggttgg 1260  
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 69 caggaagaag acaaggatgc agttaacttg aagtggatta gagactttta cgaggagatg 1380  
 71 tatgagcctt atggtggtgt tccagacctt aacactcagg ttgagagtgg taaagggtgt 1440  
 73 tttgagggat gctacttcaa ctacctgat gttgacttga acaactggaa gaacggttaag 1500  
 75 tatggtgcct tggaaacttta ctttttgggt aacctgaaca gattgatcaa ggccaaatgg 1560  
 77 ttgtgggata ctaacgagat cttcacaaac aaacagtcta tccctactaa acctcttaag 1620  
 79 ggcctaagc agactaaata gtag 1644  
 82 <210> SEQ ID NO: 2  
 83 <211> LENGTH: 546  
 84 <212> TYPE: PRT

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85 <213> ORGANISM: Chondrus crispus
87 <400> SEQUENCE: 2
89 Met Ala Thr Leu Pro Gln Lys Asp Pro Gly Tyr Ile Val Ile Asp Val
90 1 5 10 15
93 Asn Ala Gly Thr Pro Asp Lys Pro Asp Pro Arg Leu Pro Ser Met Lys
94 20 25 30
97 Gln Gly Phe Asn Arg Arg Trp Ile Gly Thr Asn Ile Asp Phe Val Tyr
98 35 40 45
101 Val Val Tyr Thr Pro Gln Gly Ala Cys Thr Ala Leu Asp Arg Ala Met
102 50 55 60
105 Glu Lys Cys Ser Pro Gly Thr Val Arg Ile Val Ser Gly Gly His Cys
106 65 70 75 80
109 Tyr Glu Asp Phe Val Phe Asp Glu Cys Val Lys Ala Ile Ile Asn Val
110 85 90 95
113 Thr Gly Leu Val Glu Ser Gly Tyr Asp Asp Asp Arg Gly Tyr Phe Val
114 100 105 110
117 Ser Ser Gly Asp Thr Asn Trp Gly Ser Phe Lys Thr Leu Phe Arg Asp
118 115 120 125
121 His Gly Arg Val Leu Pro Gly Gly Ser Cys Tyr Ser Val Gly Leu Gly
122 130 135 140
125 Gly His Ile Val Gly Gly Gly Asp Gly Ile Leu Ala Arg Leu His Gly
126 145 150 155 160
129 Leu Pro Val Asp Trp Leu Ser Gly Val Glu Val Val Val Lys Pro Val
130 165 170 175
133 Leu Thr Glu Asp Ser Val Leu Lys Tyr Val His Lys Asp Ser Glu Gly
134 180 185 190
137 Asn Asp Gly Glu Leu Phe Trp Ala His Thr Gly Gly Gly Gly Asn
138 195 200 205
141 Phe Gly Ile Ile Thr Lys Tyr Tyr Phe Lys Asp Leu Pro Met Ser Pro
142 210 215 220
145 Arg Gly Val Ile Ala Ser Asn Leu His Phe Ser Trp Asp Gly Phe Thr
146 225 230 235 240
149 Arg Asp Ala Leu Gln Asp Leu Leu Thr Lys Tyr Phe Lys Leu Ala Arg
150 245 250 255
153 Cys Asp Trp Lys Asn Thr Val Gly Lys Phe Gln Ile Phe His Gln Ala
154 260 265 270
157 Ala Glu Glu Phe Val Met Tyr Leu Tyr Thr Ser Tyr Ser Asn Asp Ala
158 275 280 285
161 Glu Arg Glu Val Ala Gln Asp Arg His Tyr His Leu Glu Ala Asp Ile
162 290 295 300
165 Glu Gln Ile Tyr Lys Thr Cys Glu Pro Thr Lys Ala Leu Gly Gly His
166 305 310 315 320
169 Ala Gly Trp Ala Pro Phe Pro Val Arg Pro Arg Lys Arg His Thr Ser
170 325 330 335
173 Lys Thr Ser Tyr Met His Asp Glu Thr Met Asp Tyr Pro Phe Tyr Ala
174 340 345 350
177 Leu Thr Glu Thr Ile Asn Gly Ser Gly Pro Asn Gln Arg Gly Lys Tyr
178 355 360 365
181 Lys Ser Ala Tyr Met Ile Lys Asp Phe Pro Asp Phe Gln Ile Asp Val

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182      370      375      380
185 Ile Trp Lys Tyr Leu Thr Glu Val Pro Asp Gly Leu Thr Ser Ala Glu
186 385      390      395      400
189 Met Lys Asp Ala Leu Leu Gln Val Asp Met Phe Gly Gly Glu Ile His
190      405      410      415
193 Lys Val Val Trp Asp Ala Thr Ala Val Ala Gln Arg Glu Tyr Ile Ile
194      420      425      430
197 Lys Leu Gln Tyr Gln Thr Tyr Trp Gln Glu Glu Asp Lys Asp Ala Val
198      435      440      445
201 Asn Leu Lys Trp Ile Arg Asp Phe Tyr Glu Glu Met Tyr Glu Pro Tyr
202      450      455      460
205 Gly Gly Val Pro Asp Pro Asn Thr Gln Val Glu Ser Gly Lys Gly Val
206 465      470      475      480
209 Phe Glu Gly Cys Tyr Phe Asn Tyr Pro Asp Val Asp Leu Asn Asn Trp
210      485      490      495
213 Lys Asn Gly Lys Tyr Gly Ala Leu Glu Leu Tyr Phe Leu Gly Asn Leu
214      500      505      510
217 Asn Arg Leu Ile Lys Ala Lys Trp Leu Trp Asp Pro Asn Glu Ile Phe
218      515      520      525
221 Thr Asn Lys Gln Ser Ile Pro Thr Lys Pro Leu Lys Glu Pro Lys Gln
222      530      535      540
225 Thr Lys
226 545

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VERIFICATION SUMMARY

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L:9 M:270 C: Current Application Number differs, Replaced Current Application No

L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date